



"...could a robot do the work necessary to build sufficient trust to get a truthful answer to 'Are you scared of him?' ... robot doctors are entirely in line with a neoliberal philosophy that sees no value in just being a human being."

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Being replaced by a robot

I'm a bit worried. I keep reading that I'm going to be replaced by a robot. Not just me, all of us. In a health system that always threatens to cost more than governments want to pay, I can see the appeal. Doctors are expensive, and want luxuries like lunch and comfort breaks. Medical errors cost the NHS large amounts of money, and the temptation to replace error-prone humans with robots is strong when the alternative is creating a culture of safety and funding it properly.

People — including ourselves — routinely use Google and Wikipedia to find accurate information. Google is actively working on improving the information available through its searches and will soon be able to diagnose diseases using machine learning algorithms.¹ Presumably, at some point in the future, a robot could very easily form an accurate differential diagnosis through a search of symptoms, incorporate blood pressure, pulse, and point-of-care test results, search clinical guidelines for management options, and, if required, do a Medline search for best evidence. And it could do all this faster than it could take me to utter the sentence *'What keeps you awake at night?'*

Should I worry about this? If the evidence comes to show that patient care is as good, cheaper, and with fewer mistakes than that provided by humans, then, surely, I should welcome it. Like workers in every industry where technological innovation has made a role redundant, perhaps I'm just protecting my future by fighting for the status quo: a small Dr Canute holding back the tides of history.

Robots give us the illusion of medical care free of any awkward values or ideology. They don't vote or argue with health ministers. But they are programmed by human beings, with assumptions made by human beings.

Robot doctors concentrate the consultation on the transactional, the transfer of information between two parties. How do robots handle the unexpected emotions swirling in a consultation? It's possible that a robot could be programmed to recognise a slightly longer-than-expected pause in its *'And how is your husband [insert husband's name]?' algorithm*. But could a robot do the work necessary to build sufficient trust to get

a truthful answer to *'Are you scared of him?'*

Perhaps it's just the more complex cases that require humans. Robots could handle minor illness very well, and single chronic diseases with clear management guidelines. However, when it comes to managing a complex mix of chronic diseases, mental health, and social circumstances, where human doctors are at their best, we'd always be starting from scratch. No tacit knowledge from previous interactions, no prior trust on which to build sensitive conversations.

Here is where the algorithm hides the ideology. We could successfully adjust our practice to be the emotionally-intelligent information broker of the healthcare team. We can become complexity surfers, proudly doing the work at the difficult end of the spectrum that even the most sophisticated robots can't do. But that is to be sucked into an ideology that says health is about accurate parsing of bits of information.

When loneliness is recognised as a cause of illness,² a health system that seeks to limit human contact is not going to be effective. There are already people whose main human contact is with their healthcare provider, which may not be a good use of health funds. However, robot doctors are entirely in line with a neoliberal philosophy that sees no value in just being a human being. We do need evidence on the effectiveness of technological solutions in health. We also need to question the philosophical underpinnings of technology applications. Perhaps one day robots will do this for us too. We'll know that's happened when we're not sure if we've got a robot or a human doctor, and the medical finals exam is a Turing test.

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